

REMARKS

Claims 1-6, 8-21, 23-30, 32 and 33 are pending in this application. By this Amendment, claims 1-3, 10, 12, 13, 15, 16, 24, 26, 29, 30 and 33 are amended. No new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

Claims 1, 3, 15, 24 and 30 are rejected under 35 U.S.C. §112, first paragraph, for allegedly failing to comply with the written description requirement. The rejection is respectfully traversed.

Claim 1 recites a resolution setting portion that selects one of a plurality of on-off control patterns of said plurality of channel selector switches, based on a selected one of a plurality of combinations of an on-off state of the first resolution setting signal and an on-off state of the second resolution setting signal. Support for these limitations can be found, for example, in paragraph [0081] of the originally filed specification.

In addition, Table 1 (paragraph [0079]) and Fig. 7A show four fall timings A-D of the strobe signal STB used as the resolution setting timing signal. One of these four fall timings A-D can be selected to select one of the four combinations of the on-off state of the start signal SP (used as the first resolution setting signal) and the on-off state of the clock pulse

signal CLK can be used as the second resolution setting signal, as described in detail in paragraphs [0076] - [0081].

In the embodiment shown in Fig. 7A and the embodiment shown in Fig. 7B and described in paragraph [0082], one of the on-off control patterns of the channel selector switches is selected by selecting one the four different combinations of the on-off states of the start signal SP and clock pulse signal CLK upon the single falling of the resolution setting timing signal (strobe signal STB).

Claim 1 also recites "upon at least one of rising and falling of said resolution setting timing signal." Fig. 9 shows the embodiment where the on-off control pattern of the channel selector switches is selected based on one of combinations of the on-off states of the first and second resolution setting signals (strobe signal STB and clock pulse signal CLK) upon the rising of the resolution setting timing signal (start signal SP) and one of combinations of the on-off states of the first and second resolution setting signals upon the falling of the resolution setting timing signal. Further, Fig. 10 shows the embodiment wherein the on-off control pattern is selected based on the combinations of the on-off states of the first and second resolution setting signals upon two successive fallings of the resolution setting timing signal.

Because the rejection did not explicitly state which portions of claims 3, 15 and 24 allegedly lack support, Applicants presume that the amendments discussed above overcome the rejection.

It is respectfully requested that the rejection be withdrawn.

Claims 29 and 33 are rejected under 35 U.S.C. §112, first paragraph, for allegedly failing to comply with the written description requirement.

The Office Action requests Applicants to provide proper written description support for a moment of detection of the multiple on-off states of the first and the multiple on-off

states of the second resolution setting signals (or clock and start signals). The Office Action further requests Applicants to show support for a single moment in time for the detection of the time the previous time-span multiple states for both signals. Claims 29 and 33 have been amended responsive to the rejection.

Paragraph [0082] of the originally filed specification and Fig. 7B describe the embodiment where the on-off states of the start signal SP (first resolution setting signal) and the clock pulse signal CLK (second resolution setting signal) are changed (by changing the widths or moments of falling of the signals SP and CLK as indicated by solid and broken lines), at the single predetermined moment of falling of the strobe signal STB (resolution setting timing signal).

The Office Action requests Applicants to provide proper written description support for a moment of detection of the multiple on-off states of the first and the multiple on-off states of the second resolution setting signals (or clock and start signals). The Office Action requests Applicants to show support for a single moment in time for the detection of the time the previous time-span multiple states for both signals. As discussed above, claims 29 and 33 have been amended responsive to the rejection.

Further, support can be found at least in Fig. 7A (which is summarized in paragraph [0081]). This embodiment is configured to change the moment at which the on-off states of the first and second resolution setting signals SP and CLK are detected, by selecting one of the four different timings A-D of falling of the resolution setting timing signal (STB). In this case, the moments of falling of the signals SP and CLK are held constant.

It is respectfully requested that the rejection be withdrawn.

Claims 10, 29 and 33 are rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. The Office Action alleges that it is unclear how previously-defined

multiple states of the start signal and previously-defined multiples states of the clock pulse signal may be changed at a predetermined moment. The rejection is respectfully traversed.

Paragraph [0082] and Fig. 7B describe the embodiment wherein the on-off states of the start signal SP (first resolution setting signal) and the clock pulse signal CLK (second resolution setting signal) are changed (by changing the widths or moments of falling of the signals SP and CLK as indicated by solid and broken lines), at the single predetermined moment of falling of the strobe signal STB (resolution setting timing signal).

It is respectfully requested that the rejection be withdrawn.

Claims 3, 15 and 24 are rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite.

The Office Action alleges that claims 3, 15 and 24 are inconsistent with claim 1. By this Amendment, claims 3, 15 and 24 have been amended responsive to the rejection and to reflect the previous amendments to claim 1.

It is respectfully requested that the rejection be withdrawn.

Claim 26 is rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite.

Claim 26 has been amended to clarify the moment of falling of each of the start and clock pulse signals SP and CLK (first and second resolution setting signals) is changed at the predetermined moment of falling of the strobe signals STB (resolution setting timing signal), as indicated in Fig. 7B and described in paragraph [0082]. In Fig. 7B, the widths of the signals SP and CLK at the predetermined moment of falling of the signal STB are changed. That is, the moment of falling (fall timings) of the signals SP and CLK at the predetermined moment of falling of the signal STB can be changed.

It is respectfully requested that the rejection be withdrawn.

Claims 10, 29 and 33 are rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. The rejection is respectfully traversed. Claim 29 has been amended responsive to the rejection (i.e., similar to the amendments to claims 1 and 30).

It is respectfully requested that the rejection be withdrawn.

Claims 10, 14 and 33 are rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite.

Claims 1, 10 and 33 are amended responsive to the rejection.

It is respectfully requested that the rejection be withdrawn.

Claim 16 is rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. By this Amendment, claim 6 is amended to reflect the previous amendment to claim 1. Further, claims 12 and 13 have been amended responsive to the rejection.

It is respectfully requested that the rejection be withdrawn.

Claim 29 is rejected under 35 U.S.C. §103(a) over Kozuka, JP-A-2000-101803. The rejection is respectfully traversed.

Claim 29 recites that the resolution setting portion selects one of a plurality of on-off control patterns of said plurality of channel selector switches, based on a selected one of a plurality of combinations of an on-off state of said start signal and an on-off state of said clock pulse signal. Applicants respectfully assert that Kozuka fails to teach and would not have rendered obvious these features.

In Kozuka, one of the on-off control patterns of the channel selector switches is selected based on only the on-off state of the clock pulse signal CLK--that is, selected depending upon whether the clock pulse signal CLK is placed in the on state or the off state. The selection of the on-off control pattern (image resolution value) is made when the start signal SP is placed in the off state. More precisely, at the moment of rising of the signal A,

which is a predetermined time after the moment of falling of the start signal SP, is described in Kozuka at paragraph [0026].

As noted in the Office Action, the pulse width of the start signal SP (the moment of falling of the start signal SP) determines the moment of detection of the on-off state of the clock pulse signal CLK to set the image resolution (high or low image resolution). The selection of the on-off control pattern of the channel selector switches is always made in the off-state of the start signal SP. Thus, only the on-off state of the clock pulse signal CLK is used to set the image resolution to the high value as indicated in Fig. 3(a), or to the low value as indicated in Fig. 3(b). In other words, one of a plurality of combinations of the on-off state of the start signal SP and the on-off state of the clock pulse signal CLK is not selected to set the image resolution value.


In the embodiment of Fig. 7A of the present application, for example, one of the four combinations of the on-off states of the start signal SP and the clock pulse signal CLK is selected by selecting one of the corresponding four fall timings of the resolution setting timing signal STB. The start signal SP in Kozuka corresponds to the resolution setting timing signal STB in Fig. 7A, and one of the two states (on state and off stage) of the clock pulse signal CLK is detected at the moment of rising of the signal A, which occurs a predetermined time after the moment of falling of the start signal SP. Although the four image resolution values (corresponding to the four combinations of the on-states of the start signal SP and the clock pulse signal CLK) are available as shown in Fig. 7A, only the two image resolution values (corresponding to the on and off states of the clock pulse signal CLK) are available in Kozuka. In summary, Kozuka does not utilize a plurality of combinations of the on-off state of the start signal SP and the on-off state of the clock pulse signal CLK, to set the image resolution value.

It is respectfully requested that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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Attachment:

Petition for Extension of Time

Date: November 10, 2009

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